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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,794	02/21/2002	Peter J. Fritz	54666US006	4815
32692	7590	09/25/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			ELEY, TIMOTHY V	
PO BOX 33427			ART UNIT	
ST. PAUL, MN 55133-3427			PAPER NUMBER	
			3724	
DATE MAILED: 09/25/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/081,794	Applicant(s) FRITZ ET AL.	
	Examiner Timothy V. Eley	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-56 is/are pending in the application.
- 4a) Of the above claim(s) 33,34,41,42,49-51 and 55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31,32,35-40,43-48,52-54 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3724

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 31,32,35-40,43-48,52-54, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al (3,562,968) et al in view of Hamerski (5,593,120).

- Johnson et al discloses a method for attaching a planar surface of a fastener(40) to a surface conditioning member(30) using an adhesive between a planar surface of the fastener and the surface conditioning member. See figures 1 and 2, column 2, lines 39-49, and claim 2.
- Johnson et al does not disclose that the fastener is attached to the member by inducing relative rotation between the fastener and the surface conditioning member with a layer of thermoplastic adhesive in contact with the planar surface of the fastener and the surface conditioning member so as to soften the layer of adhesive to form a bond between the fastener and the surface conditioning member; and thereafter stopping the relative rotation between the fastener and the surface conditioning member.
- However, Hamerski discloses a method of attaching a planar surface(see figure 2) of an attachment member(10) to a member(28) by inducing relative rotation from 2,000 to 10,000 RPM between

Art Unit: 3724

the attachment member and the member with a layer of thermoplastic adhesive(22)) in contact with a planar surface of the attachment member and the member so as to soften the layer of thermoplastic adhesive to form a bond between the attachment member and the member; and b) thereafter stopping the relative rotation between the attachment member and the member. See column 1, lines 4-18; column 6, lines 5-24; column 9, lines 17-24; and column 10, lines 48-65.

- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Johnson et al by inducing relative rotation from 2,000 to 10,000 RPM(applicant's claim 46) between the planar surface of the fastener and the surface conditioning member with a layer of thermoplastic adhesive in contact with the planar surface of the fastener and the surface conditioning member so as to soften the layer of thermoplastic adhesive to form a bond between the fastener and the surface conditioning member; and thereafter stopping the relative rotation between the fastener and the surface conditioning member in order to provide a more secure connection between the fastener and the surface conditioning member as taught by Hamerski.
- Regarding claims 32 and 54, applicant's broad recitation of a "sheet" of adhesive is clearly met by Johnson et al as modified.
- Regarding claims 36 and 37, the surface conditioning member comprises a coated abrasive. See claim 6.

Art Unit: 3724

- Regarding claim 38, Johnson et al disclose that the working surface comprises a cloth(33, see column 2, lines 43-43) but does not state that the cloth is non-woven. However, to use a woven or non-woven cloth would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made. Furthermore, claim 38, as recited, can be met by the abrasive layer, which forms a non-woven surface.
- Regarding claims 39 and 40, the fastener comprises nylon. See column 2, lines 46 and 47.
- Regarding claims 43 and 44, the layer of adhesive, as modified, comprises an inherently thermosettable thermoplastic adhesive. See column 1, lines 16-18 of Hamerski.
- Regarding claim 45, the fastener includes a generally planar base(41) and a drive member(42), wherein the planar base, as modified, includes the planar surface and a second surface opposite the planar surface, and wherein the drive member extends from the second surface of the planar base.
- Regarding claim 46, the method as modified induces a relative rotation of from 2,000 to 10,000 RPM. See column 6, lines 18-21 of Hamerski.
- Regarding claim 47, the exact compressive force would have been obvious to one having ordinary skill in the art at the time the invention was made since such would depend upon numerous factors,

Art Unit: 3724

i.e., the exact material and amount of the adhesive and/or the fastener, the shape of the adhesive, etc.

- Regarding claim 48, Hamerski discloses that fusion occurs, and thus inherently implies that the planar surface of the fastener softens and bonds with the surface conditioning member. See column 10, lines 48-65.
- Regarding claim 52, Johnson et al, as modified, discloses a surface treating article, prepared according to the method of claim 31.
- Regarding claim 53, as broadly recited, the planar surface of the fastener is substantially parallel to the surface conditioning member.
- Regarding claim 54, the sheet of adhesive is placed between the fastener and the surface conditioning member prior to the inducing relative rotation step.
- Regarding claim 56, whether an outer portion of the fastener is bonded more firmly to the surface conditioning member than a central portion thereof would have been an obvious matter of choice and structure to one having ordinary skill in the art at the time the invention was made since clearly it would be preferred to bond tighter at the outer portion, since it would render it tougher to peel the surface conditioning member from the fastener.

Art Unit: 3724

Response to Arguments

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

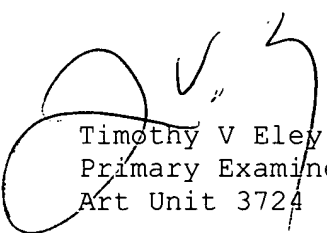
- Hara et al discloses spinning welding.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V. Eley whose telephone number is 571-272-4506. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3724

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Timothy V Eley
Primary Examiner
Art Unit 3724

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